

FIG.1A

GAGGAGTGGAGATGGCGGCGGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA 60
M A A A A Q G G G G E P R R T 17
CCGAGGGGTCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCGCTACACGCAGTTGCCAGTACATCGGCGAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAAATGTCAATCCGAGACATCTCGGGGCGTCCACCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.1B

ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC 420
V Y I V Q D L M E T D L Y K L L K S Q Q 137
AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA 480
L S N D H I C Y F L Y Q I L R G L K Y I 157
TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540
H S A N V L H R D L K P S N L L I N T T 177
CCTGCGACCTTAAGATTGTGATTTCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600
C D L K I C D F G L A R I A D P E H D H 197
ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCGAGAGATCATGC 660
T G F L T E Y V A T R W Y R A P E I M L 217
TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720
N S K G Y T K S I D I W S V G C I L A E 237

FIG.1C

AGATGCTCTAAACGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780

M L S N R P I F P G K H Y L D Q L N H I 257

TTCTGGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATAAACGGATCACAG 840

L A L D L L D R M L T F N P N K R I T V 277

TGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGACGGATGAGCCAG 900

E E A L A H P Y L E Q Y Y D P T D E P V 297

TGGCCGAGGAGCCCTTCACCTTCGCCATGGAGCTGGATGACCTACCTAAGGAGCGGCTGA 960

A E E P F T F A M E L D D L P K E R L K 317

AGGAGCTCATCTTCCAGGAGACAGCAGCTTCCAGCCCGGAGTGTGGAGGCCCCCTAGC 1020

E L I F Q E T A R F Q P G V L E A P * 335

FIG.1D

CCAGACAGACATCTCTGCACCCCTGGGGCCTGGACCTGCCCTCCTGCCCTCTCCCGC 1080
CAGACTGTAGAAAATGGACACTGTGCCAGCCCGGACCTTGGCAGCCCAAGCCGGGTG 1140
GAGCATGGGCCCTGGCCACCCTCTCTCCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCAAGG 1200
CCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCAGTTCA 1260
ATCTCCCGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGTTCT 1320
GGAA TGGAAGGTTCTGGCTGCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGGGC 1380
GCTGAGTAGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCTAGT 1440
TTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCGGC 1500
CGAATCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGGTG 1560
AGCAGAA GTGGAGCTGGGGGGCGTGGAGAGCCCGGCCCTGCCACCTCCCTGACCCCGT 1620
CTAATATATAAATATAGAGATGTGTCTATGGCTG 1654

FIG.2A

GAGGAGTGGAGATGGCGGCGGCGGCTCAGGGGGCGGGGGAGCCCCGTAGAA 60
M A A A A A Q G G G G E P R R T 17
CCGAGGGGTCCGGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCCGCTACACGCAGTTGCAGTACATCGCGCAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAAATGTCATCGGCATCCGAGACATTCTCGGGGCTCCACCCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.2B

ATGCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC 420
V Y I V Q D L M E T D L Y K L L K S Q Q 137
AGCTGAGCAATGACCATACTGCTACTTCTCTACCAGATCCTGCGGGCCTCAAGTACA 480
L S N D H I C Y F L Y Q I L R G L K Y I 157
TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540
H S A N V L H R D L K P S N L L I N T T 177
CCTGCGACCTTAAGATTGTGATTTCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600
C D L K I C D F G L A R I A D P E H D H 197
ACACCGGCTTCTTGACGGAGTATGTGGCTACGGCTGGTACCGGGCCCGAGAGATCATGC 660
T G F L T E Y V A T R W Y R A P E I M L 217
TGAAGTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720
N S K G Y T K S I D I W S V G C I L A E 237

FIG.2C

AGATGCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780
M L S N R P I F P G K H Y L D Q L N H I 257
TTCTGGGCATCCTGGGCTCCCCATCCAGGAGGACCTGAATTGTATCATCAACATGAAGG 840
L G I L G S P S Q E D L N C I I N M K A 277
CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGGCCAAGCTTTTCC 900
R N Y L Q S L P S K T K V A W A K L F P 297
CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA 960
K S D S K A L D L L D R M L T F N P N K 317
AACGGATCACAGTGGCCGAGGAGCCCTTCACCTTCGCCATGGAGCTGGATGACCTACCTA 1020
R I T V A E E P F T F A M E L D D L P K 337
AGGAGCGGCTGAAGGAGTCACTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG 1080
E R L K E L I F Q E T A R F Q P G V L E 357

FIG.2D

AGGCCCCCTAGCCAGACAGACA¹CTCTGCACCCTGGGGCCTGGACCTGCCTCCTGCCCTG 1140

A P * 359

CCCC²CTCCCCGACACTGT³TAGAAATGGACACTGTGCCAGCCCGGACCTTGGCAGCC 1200

CAGGCCGGGTGGAGCATGGGCCTGGCCACCTCTCTCCTTTGCTGAGGCCCTCCAGCTTCA 1260

GGCAGGCCAAGGCC⁴TTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGT 1320

GGCCCCAGTTCAATCTCCCGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTC 1380

TCTGGCAGTTCTGGAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGG 1440

AGGGTGGGGGCGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAA 1500

CCCCACCCTAGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGA 1560

GCCAGGCCGGCGGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTT 1620

CTGTGTGTGGTGAGCAGAAAGTGAGCTGGGGGGCGTGGAGAGCCCCGGCCCCCTGCCACC 1680

TCCCTGACCCGCTAATATATAAATATAGAGATGTGTCTATGGCTG 1726

FIG.3A

GAGAGTGGAGATGGCGGGCGGGCTCAGGGGGCGGGGAGCCCCGTAGAA 60
M A A A A Q G G G E P R R T 17
CCGAGGGGTCCGGGGTCCCGGGAGGTGGAGATGGTGAAGGGCAGCCGTTTCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCCGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGGCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAATGTCA TCGGCATCCGAGACATTCTCGGGGCGTCCACCCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.3B

ATGCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAGCCAGC 420
V Y I V Q D L M E T D L Y K L L K S Q Q 137
AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCTCAAGTACA 480
L S N D H I C Y F L Y Q I L R G L K Y I 157
TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540
H S A N V L H R D L K P S N L L I N T T 177
CCTGCGACCTTAAGATTGTGATTTCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600
C D L K I C D F G L A R I A D P E H D H 197
ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC 660
T G F L T E Y V A T R W Y R A P E I M L 217
TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720
N S K G Y T K S I D I W S V G C I L A E 237

FIG.3C

AGATGCTCTAACC GGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780
M L S N R P I F P G K H Y L D Q L N H I 257
TTCTGGGCATCCTGGGCTCCCATCCAGGAGACCTGAATTGTATCATCAACATGAAGG 840
L G I L G S P S Q E D L N C I I N M K A 277
CCCGAACTACCTACAGTCTCTGCCCTCCAAGACCAAGTGGCTTGGCCAAAGCTTTTCC 900
R N Y L Q S L P S K T K V A W A K L F P 297
CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA 960
K S D S K A L D L L D R M L T F N P N K 317
AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGA 1020
R I T V E E A L A H P Y L E Q Y Y D P T 337
CGGATGAGCCAGTGGCCGAGGAGCCCTTCACCTTCGCCATGGAGCTGGATGACCTACCTA 1080
D E P V A E E P F T F A M E L D D L P K 357

FIG.3D

AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGTGG 1140

E R L K E L I F Q E T A R F Q P G V L E 377

AGGCCCCCTAGCCCAGACAGACATCTCTGCACCCTGGGGCCTGGAAACAGAACTGGCAAAG 1200

A P * 379

AGGCAAGAGGTCACTGAGGGCCTCTGTCACCCAGGACCTGCCTTGCCTGCCCTCTCC 1260

CGCCAGACTGTTAGAAAATGGACACTGTGCCCCAGCCCGGACCTTGGCAGCCAGGCCGGG 1320

GTGGAGCATGGGCCTGGCCACCTCTCTCCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA 1380

AGGCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT 1440

TCAATCTCCCGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT 1500

TCTGGAATGGAAGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG 1560

GGCGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCTGCCTCATCTCATTTCAAACCCACCCCT 1620

AGTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG 1680

FIG.3E

GGCCGAATCCCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG 1740
GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGGGCCCTGCCACCTCCCTGACC 1800
CGTCTAATATATAAATATAGAGATGTGTCTATGGCTG 1837

FIG.4A

GAGGAGTGGAGATGGCGGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA 60
M A A A A Q G G G G E P R R T 17
CCGAGGGGTCCGGGGTCCCGGGAGGTGGAGATGCTGAAGGGCAGCCGTTCCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCGGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAATGTCATCGGCATCCGAGACATTCTCGGGGCGTCCACCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.4B

ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC 420
V Y I V Q D L M E T D L Y K L L K S Q Q 137
AGTGAGCAATGACCATATCTGCTACTTCTCTACCAGATCCTGCGGGGCCCTCAAGTACA 480
L S N D H I C Y F L Y Q I L R G L K Y I 157
TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540
H S A N V L H R D L K P S N L L I N T T 177
CCTGCGACCTTAAGATTGTGATTTCGGCCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600
C D L K I C D F G L A R I A D P E H D H 197
ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC 660
T G F L T E Y V A T R W Y R A P E I M L 217
TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCCTGGCTG 720
N S K G Y T K S I D I W S V G C I L A E 237

FIG.4C

AGATGCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780
M L S N R P I F P G K H Y L D Q L N H I 257
TTCTGGGCATCCTGGGCTCCCCATCCAGGAGGACCTGAATTGTATCATCAACATGAAGG 840
L G I L G S P S Q E D L N C I I N M K A 277
CCCGAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGGCCAAGCTTTTCC 900
R N Y L Q S L P S K T K V A W A K L F P 297
CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA 960
K S D S K A L D L L D R M L T F N P N K 317
AACGGATCACAGTGGCCGAGGAGCCCTTCACCTTCGCCATGGAGCTGGATGACCTACCTA 1020
R I T V A E E P F T F A M E L D D L P K 337

FIG.4D

AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGGAGTGCTGG 1080

E R L K E L I F Q E T A R F Q P G V L E 357

AGGCCCCCTAGCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAAACAGAACTGGCAAAG 1140

A P * 359

FIG.4E

AGGCAAGAGGTCACTGAGGGCCTCTGTCACCAGGACCTGCCTCCTGCCCTCTCTCC 1200
CGCCAGACTGTAGAAAATGGACACTGTGCCAGCCCGGACCTTGGCAGCCAGGCCGGG 1260
GTGGAGCATGGGCCTGGCCACCTCTCTCCCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA 1320
AGGCCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCAGT 1380
TCAATCTCCCGCTGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT 1440
TCTGGAATGGAAGGTTCTGGCTGCCCCCAACCTGCTGAAGGCGAGAGGTGGAGGTGGG 1500
GGCGCTGAGTAGGACTCAGGGCCATGCCTGCCCCCCCTCATCTCATTTCAAACCCACCCT 1560
AGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG 1620
GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTG 1680
GTGAGCAGAAGTGGAGCTGGGGGGCGTGGAGAGCCCGGGCCCCCTGCCACCTCCCTGACC 1740
CGTCTAATATAAATATAGAGATGTGTCTATGGCTG 1777

FIG.5A

60

1

SMAPK3V1 GAGGAGTGGAGATGGCGCGCGCGGCTCAGGGGGCGGGGCGGGGAGCCCCGTAGAA
SMAPK3V2 GAGGAGTGGAGATGGCGCGCGCGGCTCAGGGGGCGGGGCGGGGAGCCCCGTAGAA
SMAPK3 GAGGAGTGGAGATGGCGCGCGCGGCTCAGGGGGCGGGGCGGGGAGCCCCGTAGAA
SMAPK3V3 GAGGAGTGGAGATGGCGCGCGCGGCTCAGGGGGCGGGGCGGGGAGCCCCGTAGAA
SMAPK3V4 GAGGAGTGGAGATGGCGCGCGCGGCTCAGGGGGCGGGGCGGGGAGCCCCGTAGAA

120

61

SMAPK3V1 CCGAGGGGTCGGCCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGGAGCCGTTCCG
SMAPK3V2 CCGAGGGGTCGGCCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGGAGCCGTTCCG
SMAPK3 CCGAGGGGTCGGCCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGGAGCCGTTCCG
SMAPK3V3 CCGAGGGGTCGGCCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGGAGCCGTTCCG
SMAPK3V4 CCGAGGGGTCGGCCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGGAGCCGTTCCG

FIG.5B

121

180

SMAPK3V1 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA
SMAPK3V2 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA
SMAPK3 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA
SMAPK3V3 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA
SMAPK3V4 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA

181

240

SMAPK3V1 GCTCGGCCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3V2 GCTCGGCCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3 GCTCGGCCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3V3 GCTCGGCCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3V4 GCTCGGCCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG

FIG.5C

241

300

SMAPK3V1 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCCGCTTCCGCC
SMAPK3V2 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCCGCTTCCGCC
SMAPK3 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCCGCTTCCGCC
SMAPK3V3 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCCGCTTCCGCC
SMAPK3V4 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCCGCTTCCGCC

301

360

SMAPK3V1 ATGAGAAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3V2 ATGAGAAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3 ATGAGAAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3V3 ATGAGAAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3V4 ATGAGAAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG

FIG.5D

361 420

SMAPK3V1 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3V2 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3V3 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3V4 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC

421 480

SMAPK3V1 AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3V2 AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3 AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3V3 AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3V4 AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA

FIG.5E

481

540

SMAPK3V1 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3V2 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3V3 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3V4 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA

541

600

SMAPK3V1 CCTGCGACCTTAAGATTGTGATTTCCGGCCTGGCCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3V2 CCTGCGACCTTAAGATTGTGATTTCCGGCCTGGCCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3 CCTGCGACCTTAAGATTGTGATTTCCGGCCTGGCCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3V3 CCTGCGACCTTAAGATTGTGATTTCCGGCCTGGCCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3V4 CCTGCGACCTTAAGATTGTGATTTCCGGCCTGGCCCCGGATTGCCGATCCTGAGCATGACC

FIG.5F

660

601

SMAPK3V1 ACACCGGCTTCCTGACGGAGTATGTGGCTACGGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3V2 ACACCGGCTTCCTGACGGAGTATGTGGCTACGGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3 ACACCGGCTTCCTGACGGAGTATGTGGCTACGGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3V3 ACACCGGCTTCCTGACGGAGTATGTGGCTACGGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3V4 ACACCGGCTTCCTGACGGAGTATGTGGCTACGGCTGGTACCGGGCCCCAGAGATCATGC

720

661

SMAPK3V1 TGAACCTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3V2 TGAACCTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3 TGAACCTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3V3 TGAACCTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3V4 TGAACCTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG

FIG.5G

720

SMAPK3V1 AGATGCTCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA
SMAPK3V2 AGATGCTCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA
SMAPK3 AGATGCTCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA
SMAPK3V3 AGATGCTCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA
SMAPK3V4 AGATGCTCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA

840

SMAPK3V1 TTCTGG-----
SMAPK3V2 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG
SMAPK3 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG
SMAPK3V3 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG
SMAPK3V4 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG

FIG.5H

841

900

SMAPK3V1 -----
SMAPK3V2 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGCCCAAGCTTTTCC
SMAPK3 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGCCCAAGCTTTTCC
SMAPK3V3 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGCCCAAGCTTTTCC
SMAPK3V4 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGCCCAAGCTTTTCC

901

960

SMAPK3V1 -----CCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA
SMAPK3V2 CCAAGTCAGACTCCAAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA
SMAPK3 CCAAGTCAGACTCCAAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA
SMAPK3V3 CCAAGTCAGACTCCAAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA
SMAPK3V4 CCAAGTCAGACTCCAAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA

FIG.5I

961 1020
SMAPK3V1 AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGA
SMAPK3V2 AACGGATCACAGTGG-----
SMAPK3 AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGA
SMAPK3V3 AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGA
SMAPK3V4 AACGGATCACAGTGG-----
1021 1080
SMAPK3V1 CGGATGAGCCAGTGGCCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3V2 -----CCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3 CGGATGAGCCAGTGGCCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3V3 CGGATGAGCCAGTGGCCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3V4 -----CCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA

FIG.5J

	1140
SMAPK3V1	AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGGAGTGCTGG
SMAPK3V2	AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGGAGTGCTGG
SMAPK3	AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGGAGTGCTGG
SMAPK3V3	AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGGAGTGCTGG
SMAPK3V4	AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGGAGTGCTGG
	1200
SMAPK3V1	AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGA-----
SMAPK3V2	AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGA-----
SMAPK3	AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGA-----
SMAPK3V3	AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAACAGAACTGGCAAAG
SMAPK3V4	AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAACAGAACTGGCAAAG

FIG.5K

SMAPK3V1	-----CCTGCCCTCCTGCCCTGCCCTCTCTCC	1260
SMAPK3V2	-----CCTGCCCTCCTGCCCTGCCCTCTCTCC	
SMAPK3	-----CCTGCCCTCCTGCCCTGCCCTCTCTCC	
SMAPK3V3	AGGCAAGAGGTCACTGAGGGCCTCTGTACCCAGGACCTGCCCTGCCCTGCCCTCTCTCC	
SMAPK3V4	AGGCAAGAGGTCACTGAGGGCCTCTGTACCCAGGACCTGCCCTGCCCTGCCCTCTCTCC	
SMAPK3V1	CGCCAGACTGTTAGAAAATGGACACTGTGCCCCAGCCCCGGACCTTGGCAGCCCAGGCCGGG	1320
SMAPK3V2	CGCCAGACTGTTAGAAAATGGACACTGTGCCCCAGCCCCGGACCTTGGCAGCCCAGGCCGGG	
SMAPK3	CGCCAGACTGTTAGAAAATGGACACTGTGCCCCAGCCCCGGACCTTGGCAGCCCAGGCCGGG	
SMAPK3V3	CGCCAGACTGTTAGAAAATGGACACTGTGCCCCAGCCCCGGACCTTGGCAGCCCAGGCCGGG	
SMAPK3V4	CGCCAGACTGTTAGAAAATGGACACTGTGCCCCAGCCCCGGACCTTGGCAGCCCAGGCCGGG	

FIG.5L

1321

1380

SMAPK3V1 GTGGAGCATGGGCGCTGGCCACCTCTCTCTTGTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3V2 GTGGAGCATGGGCGCTGGCCACCTCTCTCTTGTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3 GTGGAGCATGGGCGCTGGCCACCTCTCTCTTGTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3V3 GTGGAGCATGGGCGCTGGCCACCTCTCTCTTGTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3V4 GTGGAGCATGGGCGCTGGCCACCTCTCTCTTGTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA

1381

1440

SMAPK3V1 AGGCCCTTCTCCTCCCCACCCGCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT
SMAPK3V2 AGGCCCTTCTCCTCCCCACCCGCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT
SMAPK3 AGGCCCTTCTCCTCCCCACCCGCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT
SMAPK3V3 AGGCCCTTCTCCTCCCCACCCGCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT
SMAPK3V4 AGGCCCTTCTCCTCCCCACCCGCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT

FIG.5M

1441 1500

SMAPK3V1 TCAATCTCCCGCTGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3V2 TCAATCTCCCGCTGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3 TCAATCTCCCGCTGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3V3 TCAATCTCCCGCTGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3V4 TCAATCTCCCGCTGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT

1501 1560

SMAPK3V1 TCTGGAAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3V2 TCTGGAAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3 TCTGGAAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3V3 TCTGGAAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3V4 TCTGGAAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG

FIG.5N

1561

1620

SMAPK3V1 GCGGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3V2 GCGGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3 GCGGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3V3 GCGGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3V4 GCGGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

1621

1680

SMAPK3V1 AGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3V2 AGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3 AGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3V3 AGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3V4 AGTTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

FIG.50

	1681	1740
SMAPK3V1	GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG	
SMAPK3V2	GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG	
SMAPK3	GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG	
SMAPK3V3	GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG	
SMAPK3V4	GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG	
	1741	1800
SMAPK3V1	GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGGGCCCCCTGCCACCTCCCTGACC	
SMAPK3V2	GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGGGCCCCCTGCCACCTCCCTGACC	
SMAPK3	GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGGGCCCCCTGCCACCTCCCTGACC	
SMAPK3V3	GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGGGCCCCCTGCCACCTCCCTGACC	
SMAPK3V4	GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGGGCCCCCTGCCACCTCCCTGACC	

FIG.5P

1801

SMAPK3V1	CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG	1654
SMAPK3V2	CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG	1726
SMAPK3	CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG	1786
SMAPK3V3	CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG	1837
SMAPK3V4	CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG	1777

FIG.6A

1	60
SMAPK3V1	MAAAAQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3V2	MAAAAQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3	MAAAAQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3V3	MAAAAQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3V4	MAAAAQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
61	120
SMAPK3V1	DHVRKTRVAIKKISPFQHTYQCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3V2	DHVRKTRVAIKKISPFQHTYQCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3	DHVRKTRVAIKKISPFQHTYQCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3V3	DHVRKTRVAIKKISPFQHTYQCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3V4	DHVRKTRVAIKKISPFQHTYQCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI

FIG.6B

	121	180
SMAPK3V1	VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL	
SMAPK3V2	VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL	
SMAPK3	VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL	
SMAPK3V3	VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL	
SMAPK3V4	VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL	
	181	240
SMAPK3V1	KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS	
SMAPK3V2	KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS	
SMAPK3	KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS	
SMAPK3V3	KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS	
SMAPK3V4	KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS	

FIG.6C

241

300

SMAPK3V1 NRPIFPGKHLYDQLNHIL-----
SMAPK3V2 NRPIFPGKHLYDQLNHILGILGSPSQEDLNLCIINMKARNYLQSLPSKTKVAWAKLFPKSD
SMAPK3 NRPIFPGKHLYDQLNHILGILGSPSQEDLNLCIINMKARNYLQSLPSKTKVAWAKLFPKSD
SMAPK3V3 NRPIFPGKHLYDQLNHILGILGSPSQEDLNLCIINMKARNYLQSLPSKTKVAWAKLFPKSD
SMAPK3V4 NRPIFPGKHLYDQLNHILGILGSPSQEDLNLCIINMKARNYLQSLPSKTKVAWAKLFPKSD

301

360

SMAPK3V1 --ALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEEPTTFAMELDDLPERL
SMAPK3V2 SKALDLLDRMLTFNPNKRITV-----AEEPTTFAMELDDLPERL
SMAPK3 SKALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEEPTTFAMELDDLPERL
SMAPK3V3 SKALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEEPTTFAMELDDLPERL
SMAPK3V4 SKALDLLDRMLTFNPNKRITV-----AEEPTTFAMELDDLPERL

FIG.6D

SMAPK3V1	KELIFQETARFQPGVLEAP-----	335
SMAPK3V2	KELIFQETARFQPGVLEAP-----	359
SMAPK3	KELIFQETARFQPGVLEAP-----	379
SMAPK3V3	KELIFQETARFQPGVLEAP-----	379
SMAPK3V4	KELIFQETARFQPGVLEAP-----	359